

Date: Wednesday, 1/11/2006 4:21:38 PM
 User: Kim Johnston

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : BRACKET ASSEMBLY
Job Number : 25442B	
Estimate Number : 10290	
P.O. Number : N/A	Part Number : D3121144
This Issue : 1/11/2006 S.O. No. : N/A	Drawing Number : D3121 REV C2
Prsht Rev. : NC	Project Number : N/A
First Issue : N/A Type : MACHINED PARTS	Drawing Revision : C2
Previous Run : 24267B	Material : N/A
Written By : <u>SEE COMMENT BELOW</u>	Due Date : 2/18/2006
Checked & Approved By : <u>SEE COMMENT BELOW</u>	Qty: 4 Um: Each
Comment : Est Rev:Pick:A 04.02.18 New issue KJ/DS	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
----------------	------------------------------	----------------------

1.0	M174B1000X02000	17-4 SS Bar
-----	-----------------	-------------



Comment: Qty.: 0.3864 f(s)/Unit Total : 0.3864 f(s)
 Material: 17-4 SS Bar per AMS 5604/5643
 (M17-4-B1.000x02.000)
 Identify for D3121-114
 Batch: M14539

SA 06.01.30

2.0	BAND SAW	BAND SAW
-----	----------	----------



Comment: BAND SAW
 Cut blanks: (1.000" x 2.000") 4.425" long

SA 06.01.30

4

3.0	HAAS1.	HAAS CNC VERTICAL MACHINING #1
-----	--------	--------------------------------



Comment: HAAS CNC VERTICAL MACHINING #1

1-Machine D3121-114 as per Folio FA330 and Dwg D3121 Identify as D3121-114 En 06/02/01 Pto

2-Deburr En 06/02/01

3-Scribe batch number En 06/02/01

4.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
-----	-----	--


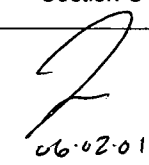




Comment: INSPECT PARTS AS THEY COME OFF MACHINE

En 06/02/01

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: 2 Date: 06/02/07
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
06/02/07	3.1	one (1) part scrap. Part too thin 0.115" instead of 0.130" - Part didn't sit in vise properly.		scrap / destroy and Replace locate part in vise correctly:	Ed 06/02/07	 06-02-07		 06-02-07

NOTE: Date & initial all entries

Date: Wednesday, 1/11/2006 4:21:38 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BRACKET ASSEMBLY

Job Number: 25442B

Part Number: D3121144

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

QC8

SECOND CHECK



Comment: SECOND CHECK

SA 06.02.02

6.0

D312121

Bolt



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part Number

Description Batch

2 D3121-21

Bolt

B25456

SP 06/02/06

7.0

D3121241

Bearing Assembly



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part Number

Description Batch

2 D3121-241 Bearing Ass

B25225

SP 06/02/06

8.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Assemble D3121-143 as per Dwg D3121.

SP 06/02/06

9.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

SP 06/02/06

10.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location:

C 206/02/06

(4)

11.0

DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

SP 06/02/07

(4)

SP 06/02/07

(4)

Job Completion



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

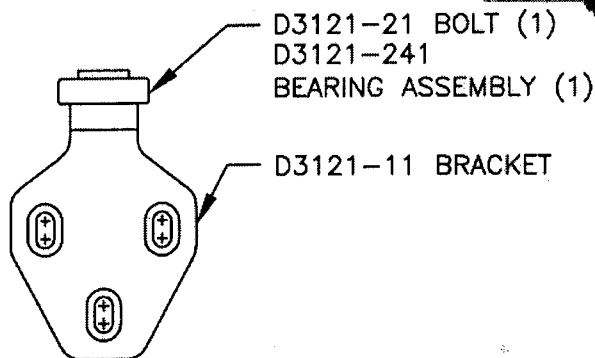
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DESIGN #	DRAWN BY CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D3121	REV. C SHEET 1 OF 10
DATE 04.02.17		TITLE BRACKET ASSEMBLY	SCALE 1:2
A	02.04.15	NEW ISSUE	
B	03.01.16	ADD RIDGES; ADD MAT'L PROP; FIX P/N ADD -141/-143/-144/-145/-146	
C	04.02.17	ADD CLEARANCE; USE -241 BEARING	
C1	CP # 04.03.26	BOLT WAS 4.00; G.11 WAS 6.14	
C2	# 04.04.26	0.230 WAS 0.238	

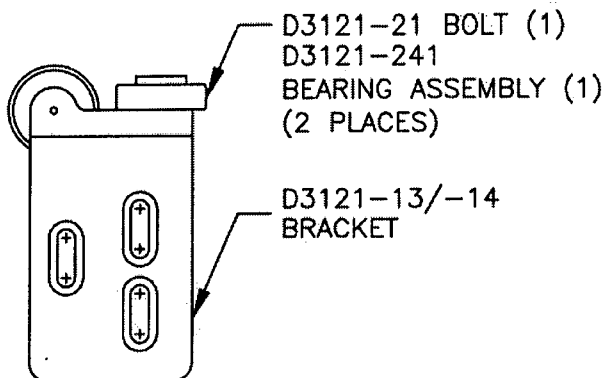
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04.03.01 #



D3121-21 BOLT (1)
D3121-241
BEARING ASSEMBLY (1)

D3121-11 BRACKET

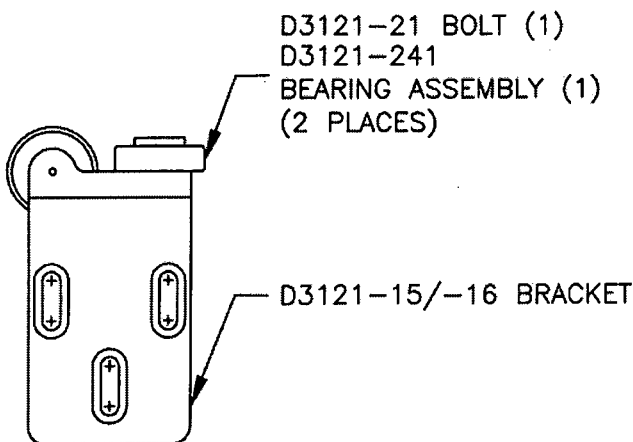
D3121-041 BRACKET ASSEMBLY
(REPLACES PREMIER P/N B30-23000-33)



D3121-21 BOLT (1)
D3121-241
BEARING ASSEMBLY (1)
(2 PLACES)

D3121-13/-14
BRACKET

**D3121-043 (SHOWN) / D3121-044 (OPPOSITE)
BRACKET ASSEMBLY**
(REPLACES PREMIER P/N B30-23000-37/-38)



D3121-21 BOLT (1)
D3121-241
BEARING ASSEMBLY (1)
(2 PLACES)

D3121-15/-16 BRACKET

**D3121-045 (SHOWN) / D3121-046 (OPPOSITE)
BRACKET ASSEMBLY**
(REPLACES PREMIER P/N B30-23000-35/-36)

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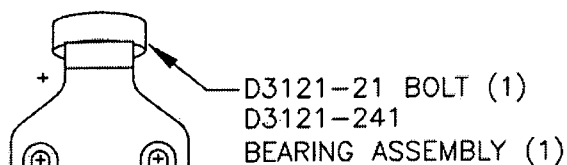
WORK ORDER
NO. 25442 B

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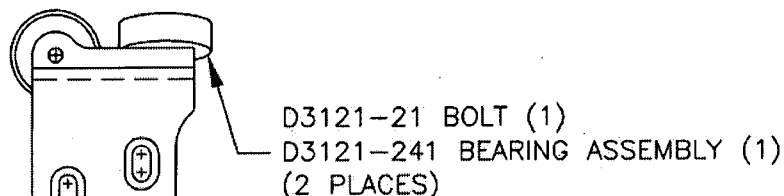


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DATE 04.02.17		TITLE BRACKET ASSEMBLY	SCALE 1:2



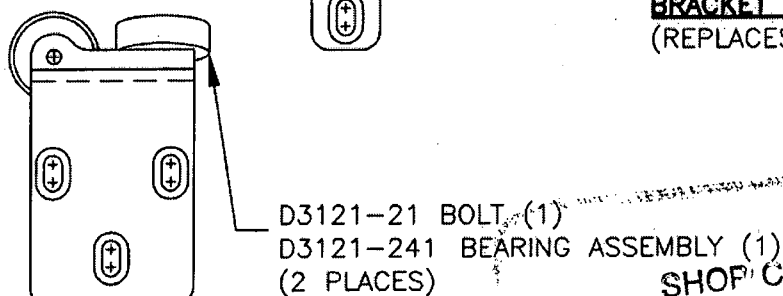
D3121-111 BRACKET

D3121-141 BRACKET ASSEMBLY
(REPLACES PREMIER P/N B30-23001-01)



D3121-113/-114 BRACKET

D3121-143 (SHOWN) / D3121-144 (OPPOSITE)
BRACKET ASSEMBLY
(REPLACES PREMIER P/N B30-23000-03/-04)



D3121-115/-116
BRACKET

D3121-145 (SHOWN) / D3121-146 (OPPOSITE)
BRACKET ASSEMBLY
(REPLACES PREMIER P/N B30-23000-05/-06)

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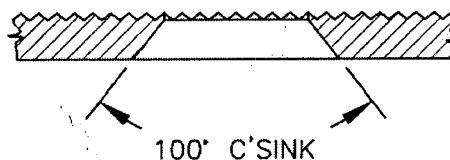
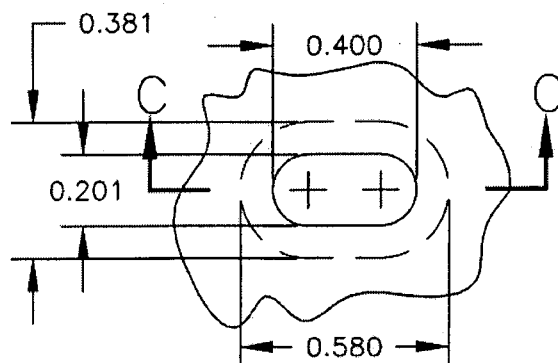
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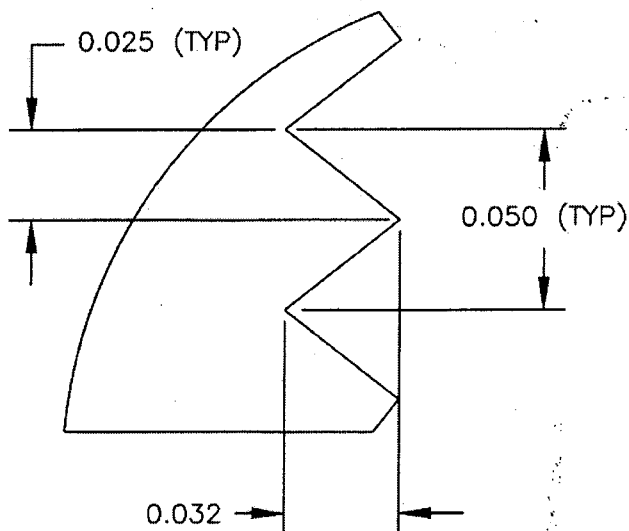
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DATE 04.02.17		TITLE BRACKET ASSEMBLY	SCALE 1:1

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DETAIL A:
SLOT DETAIL
SCALE 2:1
VIEW ROTATED



DETAIL B:
RIDGE DETAIL
PARTIAL SECTION
SCALE 1:20



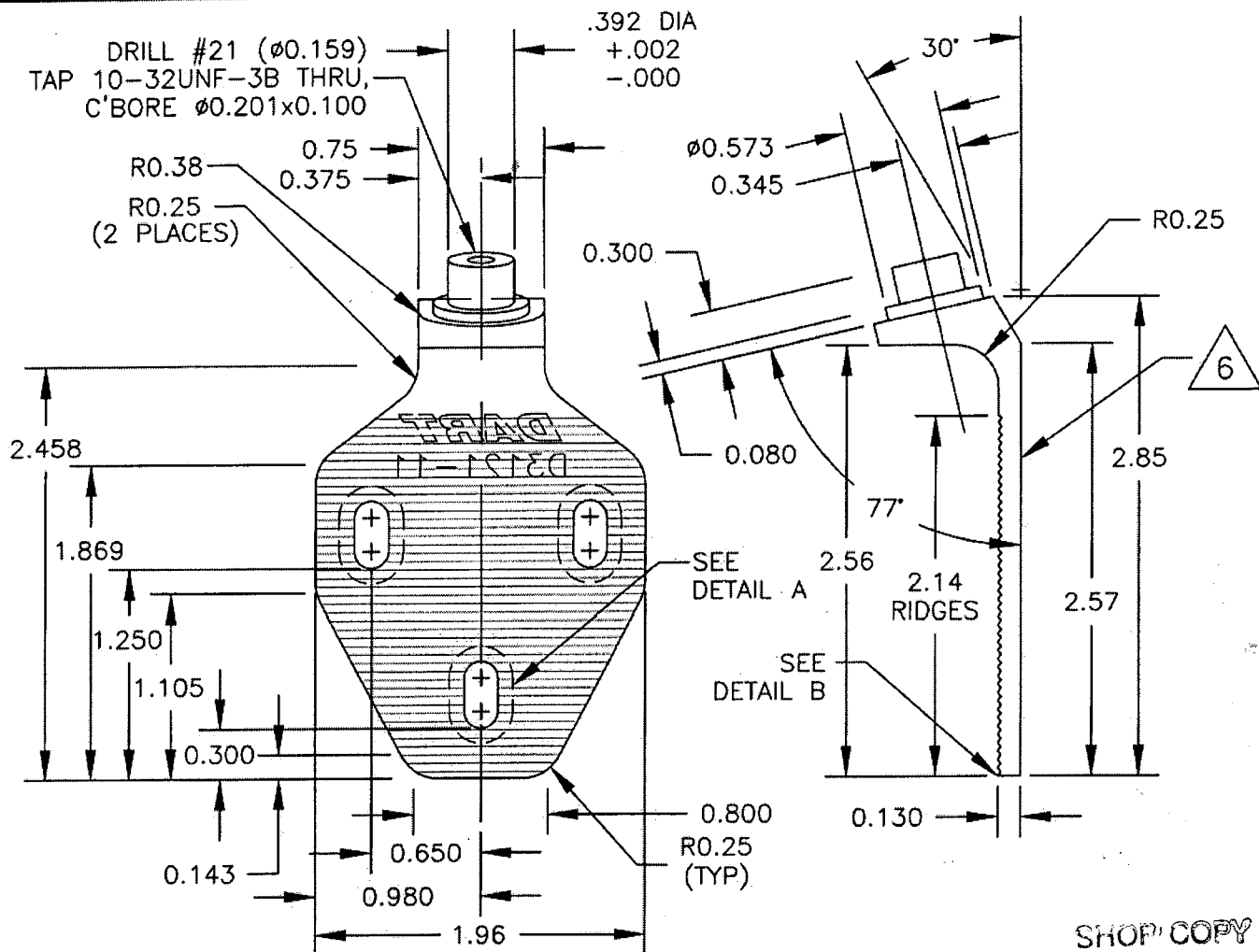
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DATE
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D3121-11 BRACKET

- 1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)
MIN ULTIMATE TENSILE = 150 ksi
MIN YIELD TENSILE = 100 ksi
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N & LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

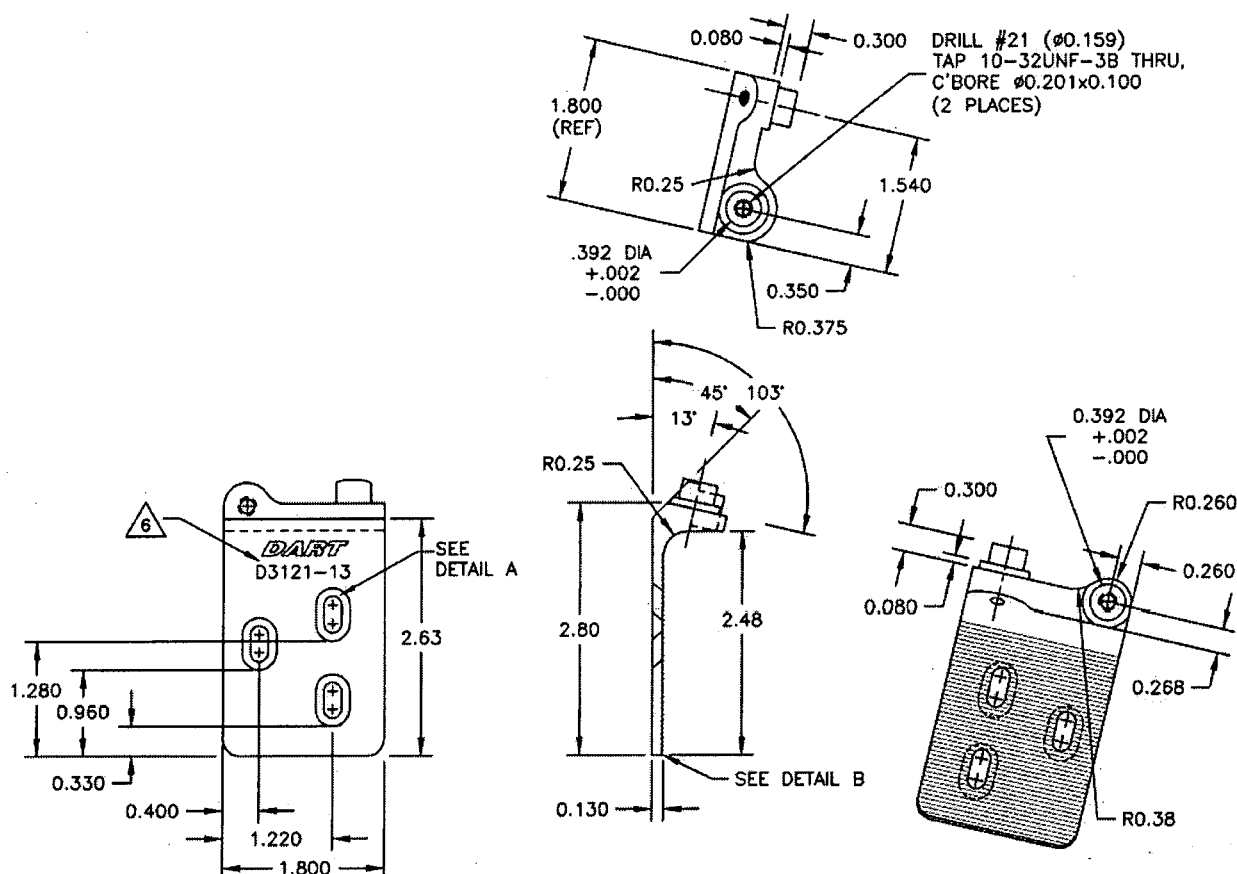
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DATE 04.02.18		TITLE BRACKET ASSEMBLY	SCALE 1:2



D3121-13 BRACKET (SHOWN)
D3121-14 BRACKET (OPPOSITE)

- 1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)
MIN ULTIMATE TENSILE STRENGTH = 150 ksi
MIN YIELD TENSILE STRENGTH = 100 ksi
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N & LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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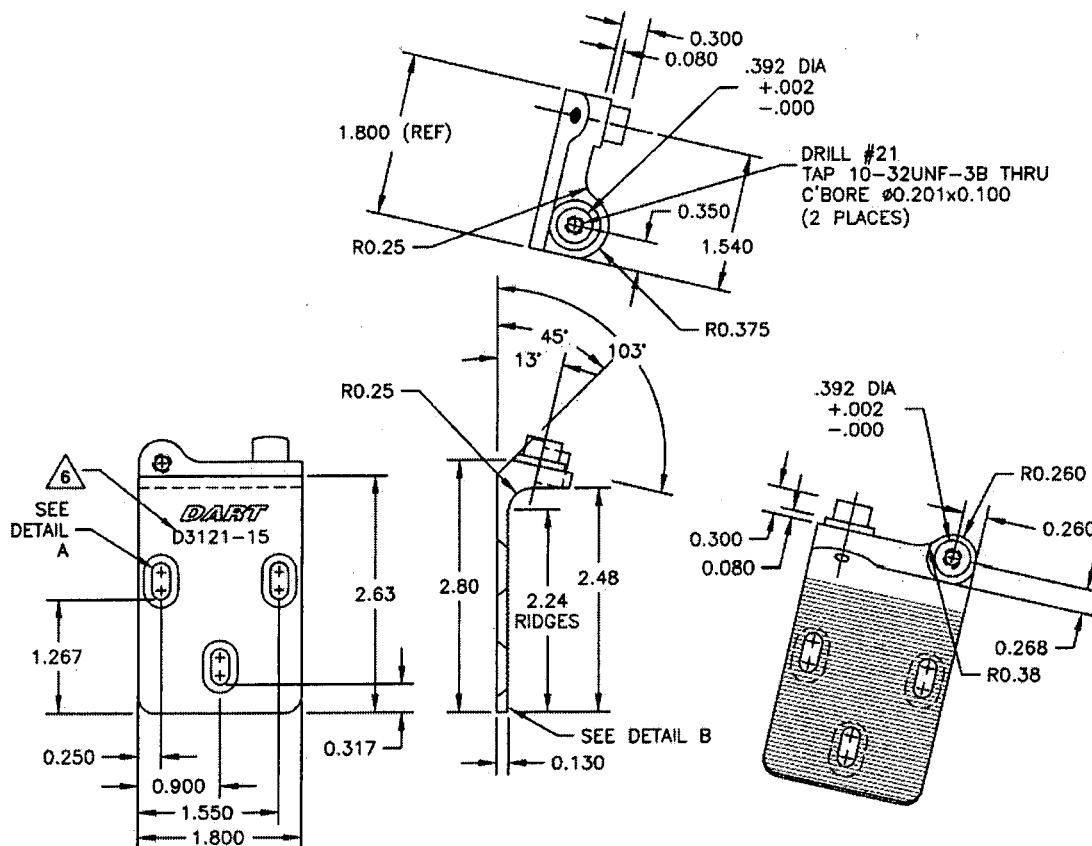
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DATE 04.02.18		TITLE BRACKET ASSEMBLY	SCALE 1:2



D3121-15 BRACKET (SHOWN)

D3121-16 BRACKET (OPPOSITE)

- 1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)
MIN ULTIMATE TENSILE = 150 ksi
MIN YIELD TENSILE = 100 ksi
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N AND LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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WORK ORDER

NO 25442B

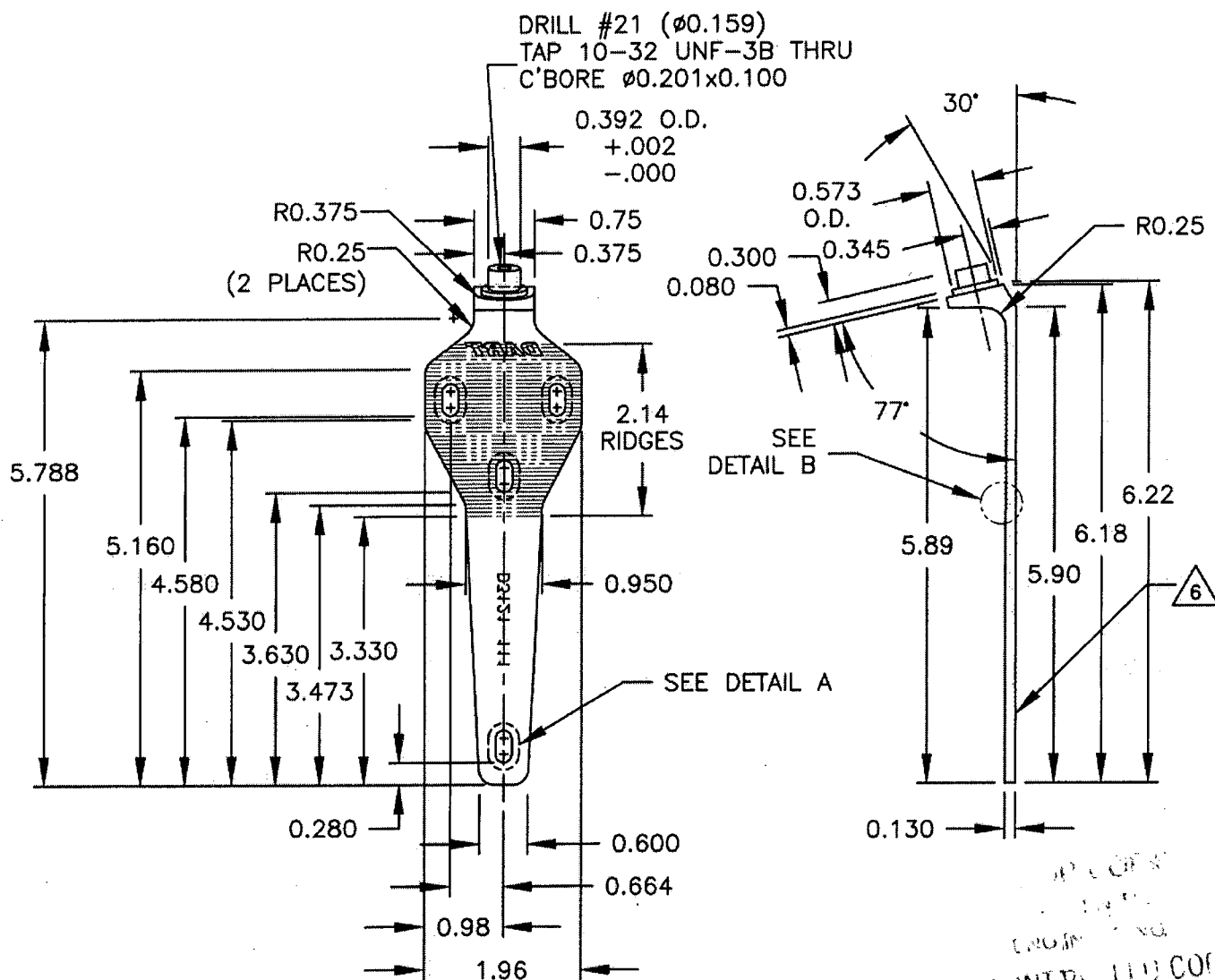
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CHECKED #	APPROVED #	DRAWING NO. D3121	REV. C SHEET 7 OF 10
DATE 04.02.18		TITLE BRACKET ASSEMBLY	SCALE 1:2



D3121-111 BRACKET

- 1) REPLACES PREMIER P/N B32-23001-11
- 2) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)
MIN ULTIMATE TENSILE = 150 ksi
MIN YIELD TENSILE = 100 ksi
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN
- 7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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WORK ORDER
NO. 25442B

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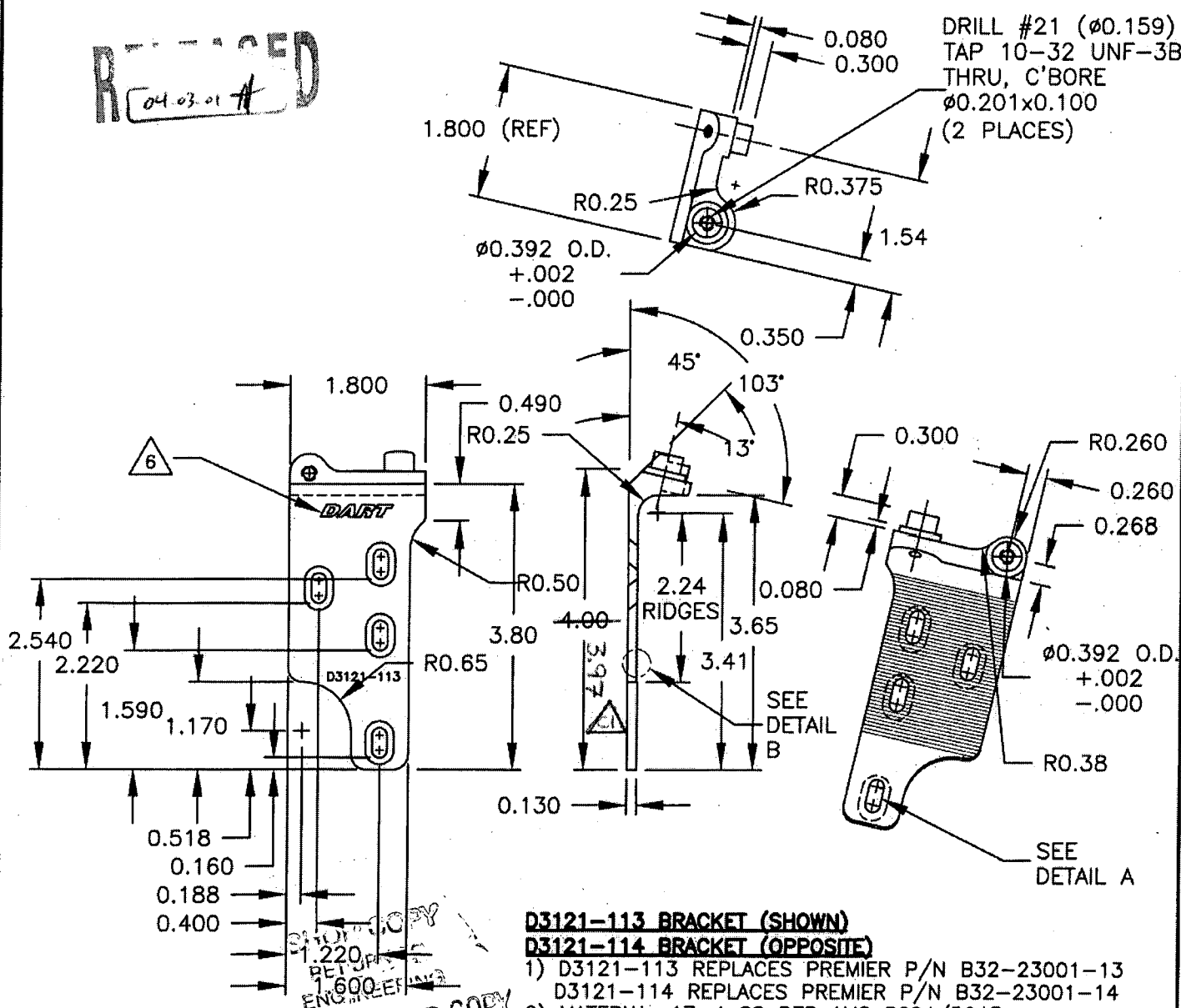
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CHECKED #	APPROVED #	DRAWING NO. D3121	REV: C SHEET 8 OF 10
DATE 04.02.18		TITLE BRACKET ASSEMBLY	SCALE 1:2

RELEASED
04.03.01 #



D3121-113 BRACKET (SHOWN)

D3121-114 BRACKET (OPPOSITE)

- 1) D3121-113 REPLACES PREMIER P/N B32-23001-13
- 2) D3121-114 REPLACES PREMIER P/N B32-23001-14

3) MATERIAL: 17-4 SS PER AMS 5604/5643

(REF DART SPEC. M17-4-B)

MIN ULTIMATE TENSILE STRENGTH = 150 ksi

MIN YIELD TENSILE STRENGTH = 100 ksi

4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

5) ALL DIMENSIONS ARE IN INCHES

6) BREAK ALL SHARP EDGES 0.005 TO 0.015

7) ENGRAVE DART P/N & LOGO IN AREAS SHOWN

8) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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WORK ORDER
NO 25442B

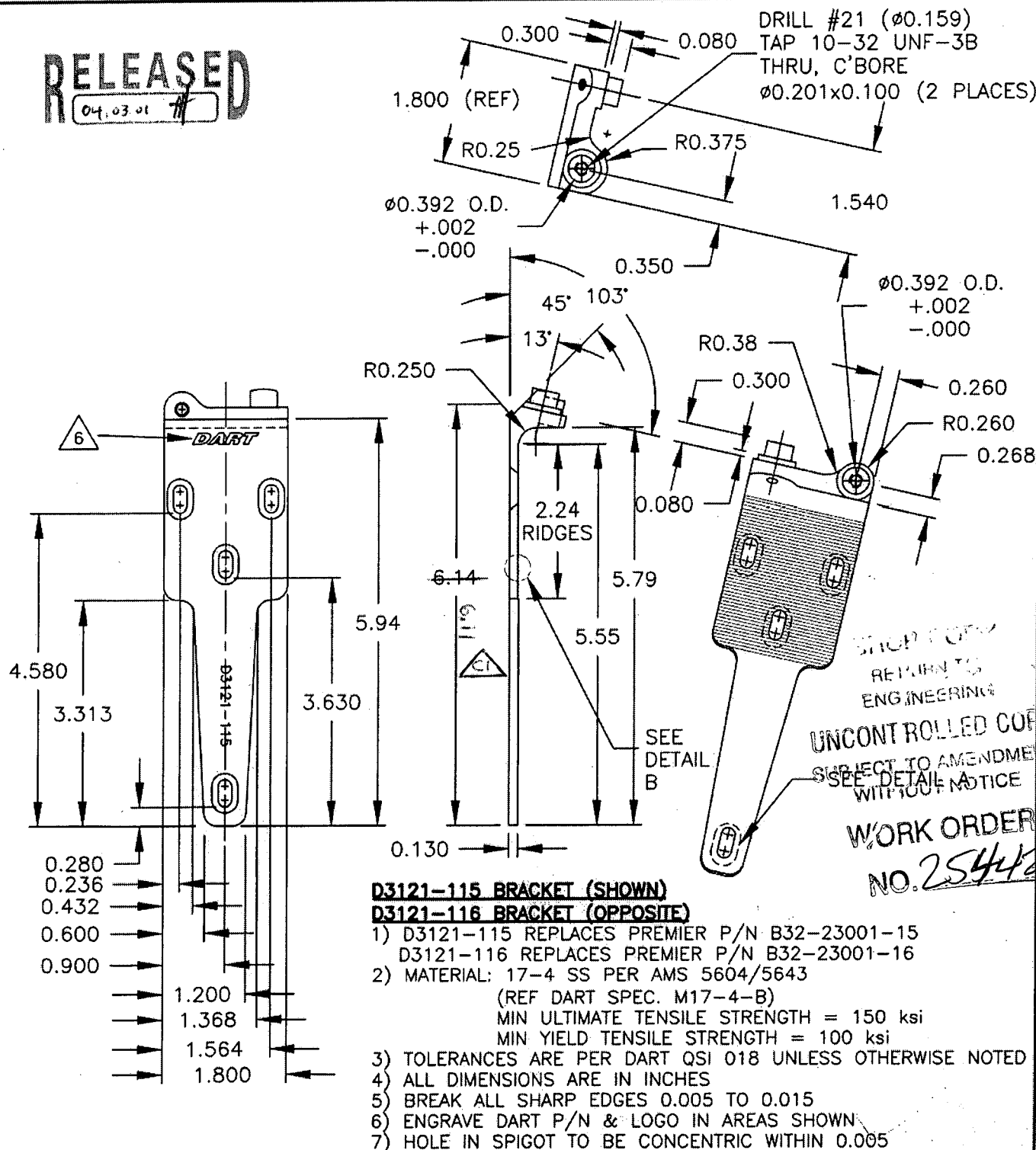
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DART

DESIGN #	DRAWN BY #	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D3121	REV. C SHEET 9 OF 10
DATE 04.02.18	TITLE BRACKET ASSEMBLY		SCALE 1:2

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04.03.01

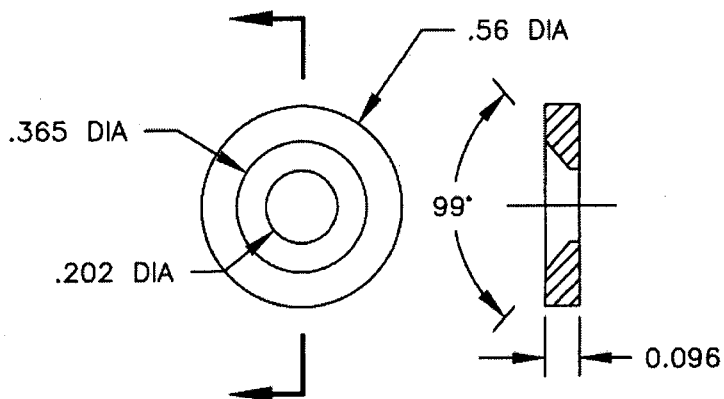


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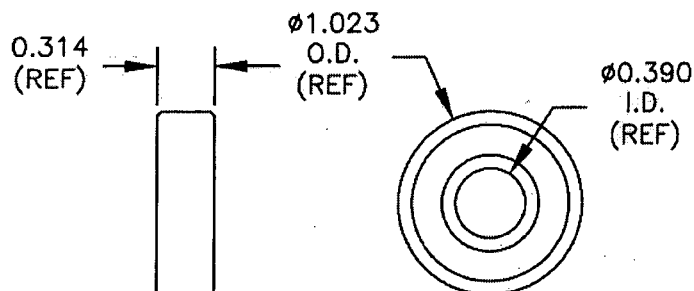
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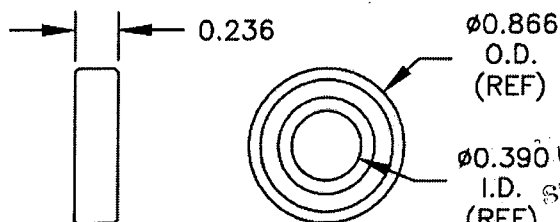
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CHECKED #	APPROVED #	DRAWING NO. D3121	REV. C SHEET 10 OF 10
DATE 04.02.17		TITLE BRACKET ASSEMBLY	SCALE 1:1

**D3121-17 WASHER (SCALE 2:1)**

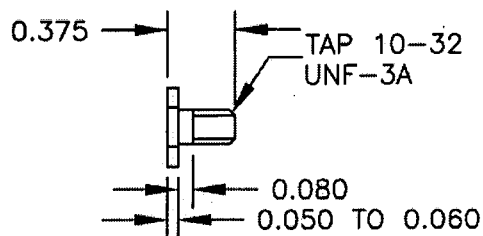
- 1) REPLACES PREMIER P/N B32-23001-17
- 2) MATERIAL: AISI 303 SS ROUND BAR, ANNEALED (REF DART SPEC. M303R)
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015

**D3121-19 BEARING (SCALE 1:1)**

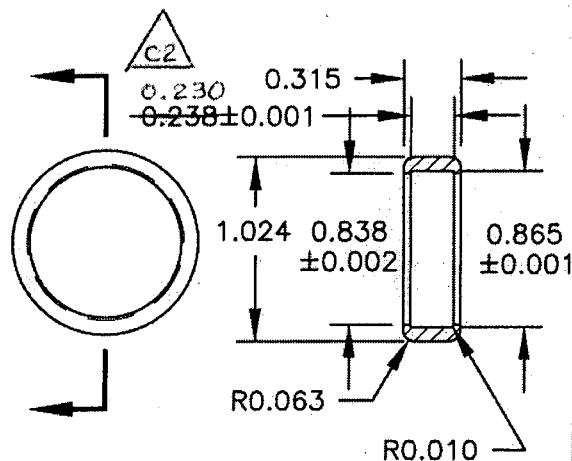
- 1) POSSIBLE SUPPLIER: KING BEARING P/N 6000-2ZJ/EM FAFNIR P/N 9100KDD
- 2) ALL DIMENSIONS ARE IN INCHES

**D3121-23 BEARING (SCALE 1:1)**

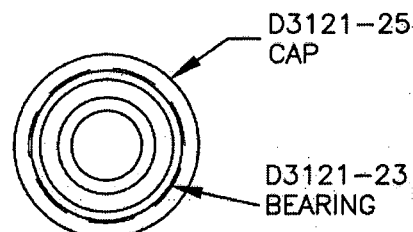
- 1) POSSIBLE SUPPLIER: SKF P/N 61900-2Z WORK ORDER NO. 25412B OR KML P/N 6900-ZZ
- 2) ALL DIMENSIONS ARE IN INCHES

**D3121-21 BOLT (SCALE 1:1)**

- 1) MATERIAL: AISI 303 SS HEX, ANNEALED (REF DART SPEC. M303H0.500)
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015

**D3121-25 CAP (SCALE 1:1)**

- 1) MATERIAL: DELRIN ROD, Ø1.25 (REF DART SPEC. M-DELRIN-R1.250)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES

**D3121-241 BEARING ASSEMBLY (SCALE 1:1)**

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DART AEROSPACE LTD		Work Order: 25442B
Description: BRACKET A		Part Number: D3121-114
Inspection Dwg: D3121	Rev: C	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☒ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1.800	± 0.030	1.801	-			
0.080	± 0.030	0.081	-			
0.300	± 0.030	0.297	-			
$\phi 0.392$	$\begin{matrix} +0.002 \\ -0.000 \end{matrix}$	0.392	-			must fit bearing
$\phi 0.201$	$\begin{matrix} +0.005 \\ -0.001 \end{matrix}$	0.198	-			
0.100	± 0.010	0.097	-			
2.540	± 0.016	2.538	-			
1.590	± 0.010	1.589	-			
0.160	± 0.010	0.159	-			
1.600	± 0.010	1.603	-			
0.400	± 0.010	0.402	-			
0.130	± 0.010	0.123	-			
3.97	± 0.030	3.966	-			
2.24	± 0.030	2.24	-			
3.41	± 0.030	3.41	-			
3.65	± 0.030	3.655	-			
0.300	± 0.010	0.298	-			
0.080	± 0.010	0.081	-			
0.392	$\begin{matrix} +0.002 \\ -0.000 \end{matrix}$	0.392	-			must fit bearing
0.032	± 0.010	0.033	-			
0.381	± 0.010	0.377	-			
0.201	± 0.010	0.202	-			
0.400	± 0.010	0.397	-			
0.580	± 0.010	0.573	-			

Measured by: En	Audited by: <i>gml</i>	Prototype Approval: N/A
Date: 06/01/31	Date: 06/01/31	Date: N/A

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	